

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A ~~vibration-proof construction~~ method for preventing or reducing vibration around a structure which generates vibration or receives vibration, ~~wherein a hard member having higher stiffness than the surrounding ground and a rubber~~ the method comprising disposing a plurality of adjoining column members and an elastic member are adjacently laid underground directly underneath or around said structure, thereby said column members forming a hard layer and a elastic layer contiguous with said elastic member, wherein said column members have a greater stiffness than the surrounding ground.
2. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein said ~~hard member is~~ column members are formed from concrete, hardening-treated soil, or iron material.
3. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein said hard layer is formed by ~~appropriately arraying multiple columns~~ said column members surrounds said elastic material.

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4. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 3, wherein a cross sectional shape of said columns ~~column members are~~ is cylindrical or square in section.

5. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein said ~~rubber~~ elastic member is formed from scrap tires or pulverized the scrap tire material.

6. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein ~~the horizontal~~ said hard layer formed by said column members surrounds said elastic layer and a cross-sectional shape of said hard layer ~~is made to be a form of at least one honeycomb shape, formed by surrounding said elastic layer with said hard layer, so as to serve as a basic shape unit~~ is hexagonal.

7. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein ~~the~~ said hard layer formed by said column members surrounds said elastic layer and a horizontal cross-sectional shape of said hard layer ~~is made to be a form of at least one square shape, formed by surrounding said elastic layer with said hard layer, so as to serve as a basic shape unit~~.

8. (Currently Amended) A ~~vibration proof construction~~ method according to Claim 1, wherein ~~the~~ said hard layer formed by said column members surrounds said elastic layer and a horizontal cross-sectional shape of said hard layer is ~~made to be a form of at least one triangular shape, formed by surrounding said elastic layer with said hard layer, so as to serve as a basic shape unit~~ triangular.

9. (Currently Amended) A ~~vibration proof construction method~~ according to Claim 1, wherein ~~at least one pair of lines with the horizontal cross sectional shapes made up of said elastic layer and said hard layer being disposed in parallel are a basic shape unit~~ said hard layer is formed by two rows of said column members disposed on opposite sides of said elastic layer.

10. (Currently Amended) A ~~vibration proof construction~~ method according to Claim 1, wherein a second hard layer having the same stiffness as ~~with~~ the surrounding ground and said elastic layer are alternately disposed in the vertical direction.

11. (Currently Amended) A ~~vibration proof construction~~ method according to Claim 1, wherein said rubber elastic member is ~~stirred in~~ mixed with the soil ~~at the lower layer thereof~~ following ~~said rubber elastic member being mixed laid underground.~~

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12. (Currently Amended) A ~~vibration-proof construction~~ method according to Claim 1, wherein said structure is a support or foundation of a bridge or elevated structure, ~~with directly underneath or around thereof being surrounded with said hard layer and said rubber elastic layer.~~

13. (New) A method according to Claim 1, wherein said elastic member and said hard layer formed by said column members form a basic unit, and a plurality of basic units are arranged in a contiguous manner underground directly underneath or around said structure.

14. (New) A system for preventing or reducing vibration around a structure which generates vibration or receives vibration, the system comprising:

an elastic member;

a plurality of adjoining column members disposed around a periphery of said elastic member, said column members forming a hard layer contiguous with said elastic member, wherein said elastic member and said column members are disposed underground directly beneath or around said structure, said column members have a greater stiffness than the surrounding ground.

15. (New) A system according to Claim 14, wherein said column members are formed from concrete, hardening-treated soil, or iron material.

16. (New) A system according to Claim 14, wherein said hard layer formed by said column members surrounds said elastic material.

17. (New) A system according to Claim 16, wherein a cross sectional shape of said column members is cylindrical or square.

18. (New) A system according to Claim 14, wherein said elastic member is formed from scrap tires or pulverized scrap tire material.

19. (New) A system according to Claim 14, wherein said hard layer formed by said column members surrounds said elastic layer and a cross-sectional shape of said hard layer is hexagonal.

20. (New) A system according to Claim 14, wherein said hard layer formed by said column members surrounds said elastic layer and a horizontal cross-sectional shape of said hard layer is square.

21. (New) A system according to Claim 14, wherein said hard layer formed by said column members surrounds said elastic layer and a horizontal cross-sectional shape of said hard layer is triangular.

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22. (New) A system according to Claim 14, wherein said hard layer is formed by two rows of said column members disposed on opposite sides of said elastic layer.

23. (New) A system according to Claim 14, wherein a second hard layer having the same stiffness as the surrounding ground and said elastic layer are alternately disposed in the vertical direction.

24. (New) A system according to Claim 14, wherein said rubber elastic member is mixed with the soil.

25. (New) A system according to Claim 14, wherein said structure is a support or foundation of a bridge or elevated structure.

26. (New) A system according to Claim 14, wherein said elastic member and said hard layer formed by said column members form a basic unit, and a plurality of basic units are arranged in a contiguous manner underground directly underneath or around said structure.